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TITLE: STONE MONUMENT AND QUARTZ GLASS WITH  
PICTURE

PUBL-DATE: November 21, 2000

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ABSTRACT:

PROBLEM TO BE SOLVED: To improve harmoniousness, to secure a grade, and to prevent the qualitative degradation by installing a ceramic plate and a quartz glass pane by transferring/printing image data such as a photograph, a picture and a character by an inorganic pigment on a surface of a stone being a stone monument body.

SOLUTION: For example, image processing is performed on image data for copying a photograph, a picture and a character by a computer to be transferred and baked on a ceramic plate and a quartz glass pane by using an inorganic

pigment. Next, the ceramic plate 1 is fitted in a fitting hole 8a arranged in a part of a tombstone 6 to be installed by a silicone resin adhesive 7. In this case, printing image data is formed as a photograph, a picture and an illustration related to the deceased. When adding an image to the tombstone 6, a function as a semipermanent personal memory is provided to enhance an added value. Thus, a visual display object is composed of different kinds of materials, harmoniousness with a stone is improved, a grade of the stone monument is secured, and the prevention of the qualitative degradation is semipermanently guaranteed to enhance a display effect.

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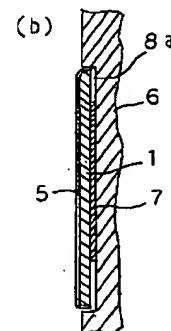
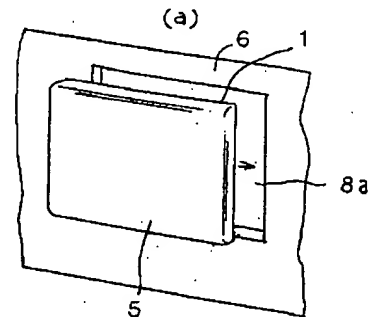
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(54) 【発明の名称】 石碑及び画像付き石英ガラス

(57) 【要約】

【課題】 写真、絵画、文字等の視覚的表示物を石碑本体（石材）と異種材料で構成しても、石材との調和性に優れ、石碑の品位を落とすことなく、しかも、褪色等の品質劣化防止を半永久的に保証し、視覚的表示効果を高める。

【解決手段】 墓石、墓誌、記念碑等の石碑本体6となる石材の表面に、写真、絵画、文字等の画像データを無機質顔料5で転写、焼き付けした陶板1（或いは石英ガラス板）がシリコーン樹脂系の接着剤を介して取り付けられている。



## 【特許請求の範囲】

【請求項1】 墓石、墓誌、記念碑等の石碑本体となる石材の表面に、写真、絵画、文字等の画像データを無機質顔料で転写、焼き付けした陶板或いは石英ガラス板が取り付けられていることを特徴とする石碑。

【請求項2】 前記陶板或いは石英ガラス板は、前記石材の表面にシリコーン樹脂系の接着剤を介して嵌め込み式或いは非嵌め込み式により貼り付けられている請求項1記載の石碑。

【請求項3】 前記陶板或いは石英ガラス板には、石碑に必要な主たる表示要素を石彫りに代わり無機質顔料で転写、焼き付けしてなる請求項1又は2記載の石碑。

【請求項4】 墓誌、墓石、記念碑の石碑本体となる石材の表面に、写真、絵画、文字等の画像データを無機質顔料で転写、焼き付けした石英ガラス板が取り付けられ、前記石材には前記石英ガラス板の裏側から光を取り入れる明かり取り用の貫通孔が設けられていることを特徴とする石碑。

【請求項5】 石英ガラス板の一面或いは両面を曇り面にして、該石英ガラスの一面に画像データを無機質顔料を用いて転写、焼き付けしてなることを特徴とする画像付き石英ガラス。

【請求項6】 石英ガラス板の一面或いは両面に無地の無機質顔料を焼き付けて、該石英ガラスの一面に画像データを無機質顔料を用いて転写、焼き付けしてなることを特徴とする石英ガラス。

## 【発明の詳細な説明】

【発明の属する技術分野】本発明は、写真、絵画、文字等の画像データを表示した石碑（例えば墓石、墓誌、記念碑等）及びこのような石碑その他種々の装飾に使用可能な画像付き石英ガラスに関する。

【従来の技術】従来より、肖像写真、絵、文字等の表示体を墓石、墓誌等の石碑に取り付ける技術が提案されている。例えば、特公平5-506号公報では、肖像写真、絵、文字等の表示内容を耐紫外線インクを用いてプラスチックシートに印刷し、この印刷面上に紫外線透過を抑制するコーティング付きのガラスを密着し、上記プラスチックシートの裏面には裏面保護板を接着し、このような積層構造体を石碑の碑面に取付けて、外光からの褪色を防止する写真等の表示技術を開示している。

【発明が解決しようとする課題】一般に石碑は屋外に設置されているため、上記したような写真、絵、文字等の印刷物を碑面に設ける場合には、褪色劣化防止や耐水性等の配慮が必要となり、そのために印刷表示物を保護する構造が複雑になる傾向がある。また、石碑は長年にわたり屋外にさらされる性質があるため、上記のような紫外線カット技術をもってしても、褪色劣化防止を半永久的に図ることは至難の技術といえる。このような写真や絵入りの石碑に関するアイデア製品が種々提案されているが、残念ながら未だに多くの需要、普及につながらな

いのが現状である。本発明者らは、その原因を追及した結果、上記したような褪色等の品質劣化の防止技術が充分ではないという理由のほかに、墓石、墓誌等の石碑に石材と異種材質の印刷表示物を取付けた時に、材質的な調和性に欠け、見る人に違和感を感じさせていること、及び墓石等の品位が損なわれないかという心理的要素が働いていることが、写真や絵入りの石碑の採用にためらいを生じさせていることがわかった。また、墓石等の石碑に画像イメージを付加する場合には、半永久的なパーソナルメモリとしての機能をもたせることが付加価値を高めるとの着想を得た。本発明は以上の点に鑑みてなされたものであり、その目的は、一つは、写真、絵画、文字等の視覚的表示物を石碑本体（石材）と異種材料で構成しても、石材との調和性に優れ、石碑の品位を落とすことなく、しかも、褪色等の品質劣化防止を半永久的に保証し、視覚的表示効果を高めることができる石碑を実現させることにある。また、画像イメージを墓石等の石碑を通して半永久的なパーソナルメモリとして機能させることも目的とする。さらに、もう一つは、上記した石碑の表示物やその他種々の装飾や記念品として利用価値のある高品質の画像付き石英ガラスを提供することにある。

【課題を解決するための手段】本発明は、上記課題を解決するために、基本的には次のように構成する。

（1）一つは、墓石、墓誌、記念碑等の石碑において、石碑本体となる石材の表面に、写真、絵画、文字等の画像データを無機質顔料で転写、焼き付けした陶板或いは石英ガラス板を取り付けたことを特徴とする。本発明者らは、石碑本体となる石材の表面（碑面）に写真、絵画、文字等の視覚的効果を高める表示体として、種々検討し試行した結果、表示体を、画像データを無機質顔料で転写、焼き付けした陶板或いは石英ガラス板で構成すれば、そのまま屋外にさらしても褪色劣化の問題を解消でき（無機質顔料の焼き付け温度は、陶板や石英ガラス板を対象とした場合、例えば800～1300℃の高温焼き付けが可能となり、このような高温での焼き付け製品は半永久的に褪色や変色しないという特徴がある）、しかも、材質的にも石碑本体を構成する石材と非常に調和性がとれ、見る人に違和感を感じさせず、質感、品位、視覚的美観を満足させることができた。さらに、応用例として、次のような石碑を提案する。前記陶板或いは石英ガラス板を前記石材（石碑本体）の表面にシリコーン樹脂系の接着剤を介して嵌め込み式或いは非嵌め込み式により貼り付けた石碑。前記陶板或いは石英ガラス板には、石碑に必要な主たる表示要素を石彫りに代わり無機質顔料で転写、焼き付けして成る。

（2）もう一つは、上記の石英ガラス板の画像焼き付け技術に関連して、石英ガラスの一面或いは両面を曇り面にしたり、これに代わって、石英ガラス板の一面或いは両面に無地の無機質顔料を焼き付け、このような石英ガ

ラスの一面に画像データを無機質顔料を用いて転写、焼き付けしてなることを特徴とする。上記構成によれば、石英ガラスの曇り面あるいは焼き付けの無地顔料（無機質顔料）が、焼き付け画像の下地面となったり、或いは裏面（ここで、裏面とは画像焼き付け面と反対側の面）に存在することになり、その結果、焼き付け画像の光透過を抑えて、透しぼけのない焼き付け画像を実現させることができた。

【発明の実施の形態】本発明の実施の形態を図面を用いて説明する。図1は本発明を適用した墓の例を示す斜視図、図2及び図3は、図1の陶板の取付直前の状態を示す斜視図及び取付け後の断面図を示したものである。これらの図において、符号の1、2、3、4で示す部材が写真、絵画、文字等の画像データを無機質顔料で転写、焼き付けした陶板（陶製の板）であり、5がその焼き付け画像すなわち無機質顔料の焼成したものである。焼き付け画像は、写真や絵画、文字等の複写できる画像データを全てコンピュータにより画像処理して、この画像データを無機質顔料を用いて陶板（あるいは石英ガラス板）に転写し、その後800～1300℃で焼成したものである。なお、陶板や石英ガラスへ模様を無機質顔料を用いて転写、焼き付けする技術に関しては、例えば、特開平5-318990号公報により知られている。本発明は、墓石が代々長年にわたり存続していくことから、墓石に画像イメージを付加する場合には、半永久的なパーソナルメモリとしての機能をもたせることが付加価値を高めるとの新たな課題に着目し、それには褪色、変色防止を恒久的なものとし、しかも、石碑と調和し、石碑の品格を損なわない素材であることが必要であるとの認識にたつて、素材に関する試行、追及を行った結果、上記した無機質顔料を用いた特殊な転写、焼き付け技術が、そのような要求を満足させることを見出したものである。画像焼き付け陶板1は、墓石6の一部に図2(a)、(b)に示すように嵌め込み穴8aを設けて、この穴8aに嵌め込まれ、シリコン樹脂系の接着剤7、例えば一成分変性シリコンシーリングを用いて取付けられている。陶板1に焼き付ける画像データは任意であり、例えば、絵画、写真や故人のゆかりのある絵やイラスト等があげられる。陶板1については、表側の面の各辺についてアールを付けて、焼き付け画面が石材から滑らかなラインを伴って表示される印象を与えている。画像焼き付け陶板2は、墓誌石9に陶板2の嵌め込み穴8bの領域を確保して、図3(a)、(b)に示すように、上記同様のシリコン樹脂系の接着剤7を用いて取り付けられている。画像焼き付け陶板2には、故人の肖像写真を無機質顔料5を用いて転写、焼き付けしてあり、陶板の形状は図のような円形のほかに楕円、四角形等任意である。本例では、墓誌石9に多数の嵌め込み穴8bを設けて、家系ルーツとして代々の故人の肖像を陶板2を通して表示できるようにしてある。画像焼き付

け陶板3には、墓誌に必要な主たる表示要素の画像データ、例えば故人の戒名や生没年月日、年齢等が石彫りに代えて上記同様に無機質顔料5を用いて転写、焼き付けしてあり、墓誌石9に嵌め込み式（あるいは非嵌め込み式）によりシリコン樹脂系の接着剤を介して取り付けられている。画像焼き付け陶板4には、家紋を無機質顔料5を用いて転写、焼き付けしてあり、墓の門柱10に設けた嵌め込み穴にシリコン樹脂系の接着剤を用いて取り付けられている。本実施例によれば、次のような効果を奏する。

(1) 写真、絵画、文字等の視覚的表示物を石碑に設けた場合であっても、その画像データを素地のままで褪色や変色することなく半永久的に保証することができ、特に、家系の代々にわたり守られていくといった墓石等（石碑）の性質と相俟って、故人等に関する顔や履歴等を消失することなく半永久的に保存できる。したがって、長年の保存が特別なものでない限り風化し、時の経過とともになおざりにされやすい個人の写真や履歴に関するデータであっても、半永久的なパーソナルメモリとして保存することができる。しかも、材質的にも石碑本体を構成する石材と非常に調和性がとれ、見る人に違和感を感じさせず、質感、品位、視覚的美観を満足させることができる。

(2) 画像焼き付け陶板や石英ガラスをシリコン接着剤を用いて石碑に接着した場合、陶板や石英ガラスと石碑本体（石材）との相性が良く、しかも、弾力性に富むために、陶板や石英ガラスに衝撃が加わったとしても衝撃吸収を図り、耐衝撃効果を高める。また、セメント（モルタル材）を用いた接着材のようにひびわれが発生せず、陶板或いは石英ガラス板の保持力を半永久的に保証し、(1)の効果を實現させるに貢献する。

(3) 墓誌に関する画像焼き付け陶板3に関しては、墓誌等の石碑に必要な主たる表示要素を石彫りに代わり無機質顔料で陶板或いは石英ガラスに転写、焼き付けすることで、今までにない新しい感覚の近代的な石碑を實現させることができた。また、この場合には、文字、写真、絵画等の任意の組み合わせで幅広いニーズに応えることが可能になる。また、石彫りの技術を利用しないで、最新のコンピュータ画像処理技術をもって高品質の石碑を構築することが可能になる。

(4) 画像データを屋外にさらされる石碑に適用しても、800～1300℃の焼き付けを施すために、いわずらで火にあぶられたりタバコ火を押しつけられたとしても損傷することなく、また、傷もつけにくい性質を有しているので、このようないたずらの危惧からも解放されることができる。図4は本発明の他の実施例であり、本例では、墓石6を構成する石材の碑面に形成される主たる表示要素を、石彫りに代わって画像焼き付け陶板1（或いは画像焼き付け石英ガラス）を取り付けたものである。陶板1に焼き付ける画像は、絵画、写真、文字の

いずれか一種或いはこれらの任意の組み合わせでよい。本実施例においても、今までにない新しい感覚の、しかも職人技術を要する石彫りに代わって石材との調和、品格のある近代的な石碑を実現させることができる。また、文字、写真、絵画等の任意の組み合わせで幅広いニーズに応えることが可能になる。図5は本発明の他の実施例に関するもので、例えば墓石6（或いはその他の各種石碑）に画像データに関する無機質顔料を焼き付けた石英ガラス11を接着剤7を介して取り付けただのもであり、石材（石碑）6には石英ガラス板11の裏側から光を取り入れる明かり取り用の貫通孔12が設けられている。貫通孔12を設ける都合から、石英ガラス11の嵌め込み穴8は、貫通孔12の開口周縁に形成されている。本実施例によれば、石英ガラスに施した画像に光の透過効果を与えることで、石碑に斬新な視角的効果を与えることができる。図6は、画像焼き付け石英ガラス11の他の実施例を示す縦断面図である。図6の（a）は石英ガラス11の一面（表側）に、上記した絵画、写真、文字等に関する画像データを無機質顔料5aで転写、焼き付けしたもので、他面（裏側）には無地の無機質顔料5bを転写、焼き付けしたものである。無地の無機質顔料5bは、例えば白色のように光を吸収しにくい色が好ましい。図6の（b）は、石英ガラス11の表側の面は透明な面とし、裏側の面に第1層（内層）として画像データを無機質顔料5aで転写、焼き付けし、第2層（外層）として無地、例えば白色の無機質顔料5bを転写焼き付けしたものである。図6の（c）は、図6の（b）とは反対に、表側の面に第1層（内層）として画像データを無機質顔料5aで転写、焼き付けし、第2層（外層）として無地、例えば白色の無機質顔料5bを転写焼き付けしたものである。これらの実施例によれば、無機質顔料5bが石英ガラス11の光透過を阻止する下地や裏地となり、透しぼけをなくして陶板に画像データを転写、焼き付けしたものと同等の視角効果を与えることが可能になり、また、図6の（a）、（b）と（c）とでは、前者が素地の状態で焼き付け画像を観ることにになり、後者がガラス越しに焼き付け画像を観ることにになり、いずれかのものを採用することで、視角的効果の印象を変えることができ、需要者の選択の範囲を広げることができる。石英ガラスは、純度の高い珪石、珪砂を溶融して作るため、溶融温度が通常のガラスに較べて高く、耐高温性を有しており、画像データを無機質顔料を

用いて転写、焼き付けする場合であっても、840℃程度の高温焼き付けも可能になり、また、無機質顔料を焼き付けることで、陶製品の模様や色彩の焼き付け同様に变色、褪色を半永久的に保証する。なお、図6の実施例は、石碑のほかに種々の装飾用途に使用することが可能であり、特に石英ガラスの材質感と透しぼけのない明瞭なる焼き付け画像データの両者を満足させる効果を奏する。また、図6の実施例では、石英ガラスに施した焼き付け画像の透しぼけ手段として、無地の無機質顔料を焼き付けしたものを例示したが、この無機質顔料5bに代えて符号の13に示すように石英ガラス板の一面（或いは両面）を曇り面にして、石英ガラスの一面に画像データを無機質顔料5aを用いて転写、焼き付けしても、図6の実施例同様の効果を奏することができる。この曇り面は、石英ガラスの焼成時の表面に生じる曇りの皮膜を取り去らずに残しておくことで、すなわち、ガラス面を研磨仕上げしないことで、そのまま得られる。

【発明の効果】以上のように、第1の発明によれば、写真、絵画、文字等の視覚的表示物を石碑本体（石材）と異種材料で構成しても、石材との調和性に優れ、石碑の品位を落とすことなく、しかも、褪色等の品質劣化防止を半永久的に保証し、視覚的表示効果を高めることができる。また、画像イメージを墓石等の石碑を通して半永久的なパーソナルメモリとして機能させることもできる。第2の発明によれば、上記した石碑の表示物やその他種々の装飾や記念品として利用価値のある高品質の画像付き石英ガラスを提供することができる。

#### 【図面の簡単な説明】

【図1】本発明を適用した墓の例を示す斜視図。

【図2】（a）は図1の陶板1の取付直前の状態を示す斜視図、（b）はその取付後の断面図。

【図3】（a）は図1の陶板2の取付直前の状態を示す斜視図、（b）はその取付後の断面図。

【図4】本発明の他の実施例を示す斜視図。

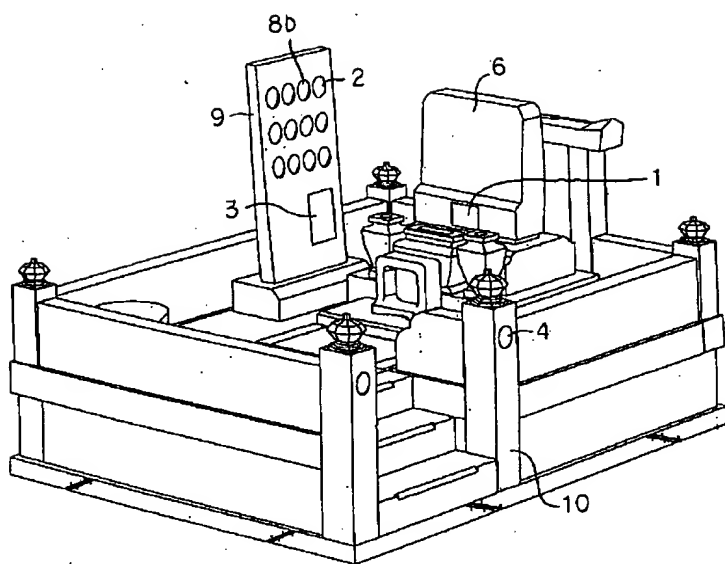
【図5】本発明の他の実施例を示す部分断面図。

【図6】本発明の他に実施例を示す部分断面図。

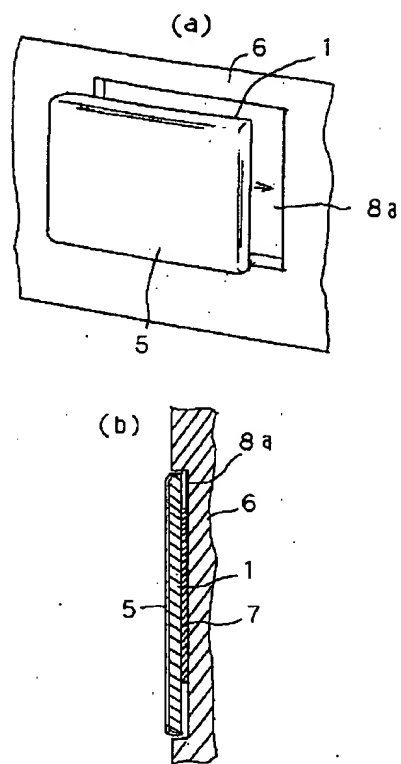
#### 【符号の説明】

1, 2, 3, 4…焼き付け画像付き陶板（或いは石英ガラス）、5…無機質顔料の焼成物（焼き付け画像）、5a…無地の無機質顔料、6…墓石、7…接着剤、9…墓誌石、11…石英ガラス、12…明かり取り用貫通孔、13…曇り面。

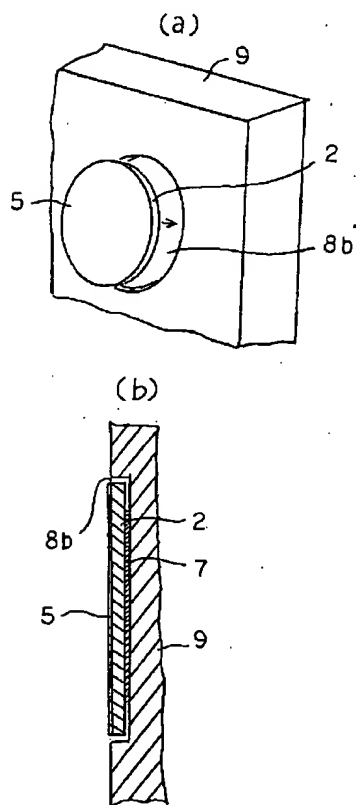
【図1】



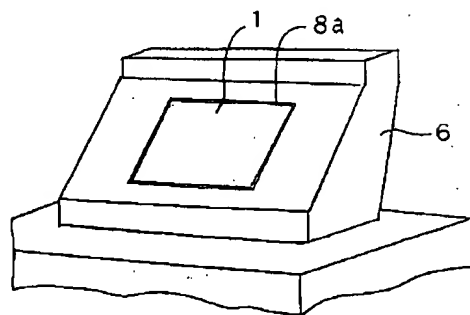
【図2】



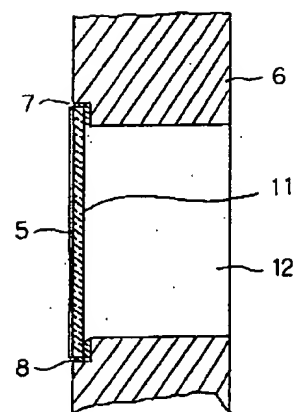
【図3】



【図4】

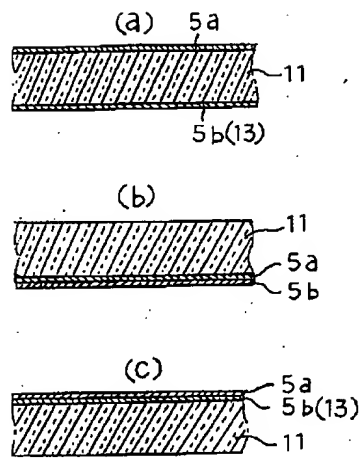


【図5】





【図6】



# PATENT ABSTRACTS OF JAPAN

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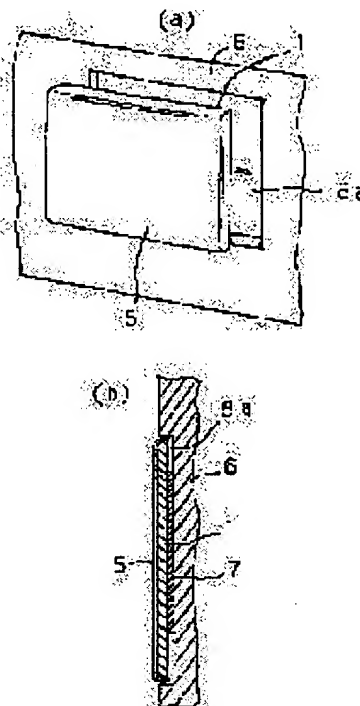
(72)Inventor : MIYAMOTO YOSHIFUMI

## (54) STONE MONUMENT AND QUARTZ GLASS WITH PICTURE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To improve harmoniousness, to secure a grade, and to prevent the qualitative degradation by installing a ceramic plate and a quartz glass pane by transferring/printing image data such as a photograph, a picture and a character by an inorganic pigment on a surface of a stone being a stone monument body.

**SOLUTION:** For example, image processing is performed on image data for copying a photograph, a picture and a character by a computer to be transferred and baked on a ceramic plate and a quartz glass pane by using an inorganic pigment. Next, the ceramic plate 1 is fitted in a fitting hole 8a arranged in a part of a tombstone 6 to be installed by a silicone resin adhesive 7. In this case, printing image data is formed as a photograph, a picture and an illustration related to the deceased. When adding an image to the tombstone 6, a function as a semipermanent personal memory is provided to enhance an added value. Thus, a visual display object is composed of different kinds of materials, harmoniousness with a stone is improved, a grade of the stone monument is secured, and the prevention of the qualitative degradation is semipermanently guaranteed to enhance a display effect.



## LEGAL STATUS

[Date of request for examination]

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[Date of extinction of right]

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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[The technical field to which invention belongs] this invention relates to quartz glass with a picture usable in an ornament the monuments (for example, a gravestone, an epitaph, a monument, etc.) which displayed image data, such as a photograph, pictures, and a character, and such a monument, and various [ other ].

[Description of the Prior Art] Conventionally, the technology of attaching display objects, such as a portrait photograph, a picture, and a character, in monuments, such as a gravestone and an epitaph, is proposed. For example, the contents of a display, such as a portrait photograph, a picture, and a character, are printed to a sheet plastic using ultraviolet-rays-proof ink, the glass with coating which suppresses ultraviolet-rays transparency is stuck on this printing side, a rear-face guard plate pastes up on the rear face of the above-mentioned sheet plastic, such a laminated-structure object attaches in \*\*\*\* of a monument, and display technology, such as a photograph which prevents the tenebrescence from outdoor daylight, is indicating in JP,5-506,B.

[Problem(s) to be Solved by the Invention] Generally, since the monument is installed in the outdoors, when preparing printed matter, such as a photograph which was described above, a picture, and a character, in \*\*\*\*, consideration of tenebrescence degradation prevention, water resistance, etc. is needed, and it has the inclination for the structure of protecting a printing display object for the reason to become complicated. Moreover, since a monument has the property exposed to the outdoors over many years, even if it carries out with the above ultraviolet-rays cut technology, it can be called most difficult technology to aim at tenebrescence degradation prevention semipermanently. Although the idea product about such a photograph and an illustrated monument is proposed variously, though regrettable, the present condition is yet not leading to much need and spread. Besides the reason this invention persons do not have the enough prevention technology of quality degradation, such as tenebrescence which was described above, as a result of investigating the cause When a stone and the printing display object of the different-species quality of the material are attached in monuments, such as a gravestone and an epitaph, quality of the material harmony nature is missing, and those who see are made to sense sense of incongruity, And it turns out that that the mental element whether grace, such as a gravestone, is spoiled is working is making adoption of a photograph or an illustrated monument produce hesitation. Moreover, when a picture image was added to monuments, such as a gravestone, the idea that giving the function as semipermanent personal memory raises added value was obtained. It is in this invention being made in view of the above point, and making the monument with which the purpose can moreover guarantee quality degradation prevention of tenebrescence etc. semipermanently, and can heighten the visual display effect, without excelling in harmony nature with a stone and dropping the grace of a monument even if one constitutes visual display objects, such as a photograph, pictures, and a character, from a main part of a monument (stone), and a dissimilar material realize. Moreover, also let it be the purpose to operate a picture image as semipermanent personal memory through monuments, such as a gravestone. Furthermore, another is to offer the quality quartz glass with a picture which has utility value as the display object, the various ornaments in addition to this, and souvenir of the above-mentioned monument.

[Means for Solving the Problem] this invention is fundamentally constituted as follows, in order to solve the above-mentioned technical problem.

(1) One is characterized by attaching in the front face of the stone used as the main part of a monument \*\*\*\* or the quartz-glass board which imprinted image data, such as a photograph, pictures, and a character, with the minerals pigment, and was burned in monuments, such as a gravestone, an epitaph, and a monument. This invention persons as a display object which raises visual effects, such as a photograph, pictures, and a character, to the front face (\*\*\*\*) of the stone used as the main part of a monument If a display object is constituted from \*\*\*\* or the quartz-glass board which imprinted image data with the minerals pigment and was burned as a result of examining many things and trying Even if it exposes to the outdoors then, the problem of tenebrescence degradation is solvable (the baking temperature of a minerals pigment). When aimed at \*\*\*\* or a quartz-glass board, 800-1300-degree C elevated-temperature baking is attained. The baking product in such an elevated temperature was not able to make those who have semipermanently tenebrescence and the feature of not discoloring and who can take harmony nature very much with the stone which moreover constitutes the main part of a monument also in quality of the material, and see have been able to sense sense of incongruity, but was able to satisfy texture, grace, and the visual fine sight. Furthermore, the following monuments are proposed as an application. The monument which inserted the aforementioned \*\*\*\* or the quartz-glass board in the front face of the aforementioned stone (main part of a monument) through the adhesives of a silicone resin system, and was stuck by the formula or the non-insertion formula. A main display element required for a monument is replaced with stone engraving, and with a minerals pigment, it imprints, burns to the

aforementioned \*\*\*\* or a quartz-glass board, and grows into it.

(2) In relation to the picture baking technology of the above-mentioned quartz-glass board, another blooms cloudy the whole surface or both sides of quartz glass, on the whole surface of such quartz glass, a minerals pigment is used for it, imprints image data, burns [ it is made a field or a plain minerals pigment is printed on the whole surface or both sides of a quartz-glass board instead of this, and ], and is characterized by the bird clapper. According to the above-mentioned composition, the cloudy side of quartz glass or the solid color pigment (minerals pigment) of baking was able to become the ground side of a baking picture, it is able to exist in a rear face (here, a rear face is a picture seizure side and a field of an opposite side), consequently the light transmission of a baking picture was able to be stopped, and the baking picture without watermark dotage was able to be made to realize.

[Embodiments of the Invention] The gestalt of operation of this invention is explained using a drawing. The perspective diagram, drawing 2, and drawing 3 which show the example of the grave where drawing 1 applied this invention show the perspective diagram showing the state in front of attachment of \*\*\*\* of drawing 1, and the cross section after anchoring. \*\*\*\* (ceramic board) which the member shown by 1, 2, 3, and 4 of a sign imprinted image data, such as a photograph, pictures, and a character, with the minerals pigment, and burned in these drawings -- it is -- 5 -- the baking picture, i.e., a minerals pigment, -- calcinating. A baking picture carries out the image processing of all the image data that can be copied [ character / pictures, a character / a photograph, ] by computer, imprints this image data to \*\*\*\* (or quartz-glass board) using a minerals pigment, and calcinates it at 800-1300 degrees C after that. In addition, about the technology which uses a minerals pigment, and imprints and burns a pattern to \*\*\*\* or quartz glass, it is known by JP,5-318990,A, for example. Since the gravestone continues over many years from generation to generation, when adding a picture image to a gravestone, this invention Its attention is paid to a new technical problem that giving the function as semipermanent personal memory raises added value. Make tenebrescence and discoloration prevention lasting at it, and, moreover, it harmonizes with a monument. To recognition that it is required to be the material which does not spoil the dignity of a monument, earnestly, as a result of performing trial about a material, and investigation, the special imprint using the above-mentioned minerals pigment and baking technology find out satisfying such a demand. Picture baking \*\*\*\* 1 is inserted in as shown in some gravestones 6 at drawing 2 (a) and (b), prepares hole 8a, is inserted in this hole 8a, and is attached using the adhesives 7 of a silicone resin system, for example, 1 component denaturation silicon sealing. The image data printed on \*\*\*\* 1 is arbitrary, for example, a picture, an illustration, etc. with the connection of pictures, a photograph, or the deceased are raised. About \*\*\*\* 1, the R was attached about each side of the field of a side front, and the impression as which a baking screen is displayed with a smooth line from a stone is given. Picture baking \*\*\*\* 2 secures the field of insertion hole 8b of \*\*\*\* 2 to the epitaph stone 9, and as shown in drawing 3 (a) and (b), it is attached using the adhesives 7 of the same silicone resin system as the above. They are arbitration, such as an ellipse and a square, besides a round shape [ like / the \*\*\*\* / in picture baking \*\*\*\* 2, have used, imprinted and burned the deceased's portrait photograph in the minerals pigment 5, and / drawing ] whose configuration of \*\*\*\* is. Much insertion hole 8b is prepared in the epitaph stone 9, and it enables it to have displayed the portrait of the deceased for generations through \*\*\*\* 2 in this example as a stirps root. It replaces with stone engraving, the minerals pigment 5 is used like the above, and it has imprinted and burned, and the image data of a main display element required for an epitaph, for example, the deceased's posthumous Buddhist name, birth and death dates, age, etc. insert in the epitaph stone 9, and are attached in picture baking \*\*\*\* 3 by the formula (or non-insertion formula) through the adhesives of a silicone resin system. The minerals pigment 5 is used, and the family crest is imprinted, and is burned, and the adhesives of a silicone resin system are used for picture baking \*\*\*\* 4, and it is attached in the insertion hole established in the gatepost 10 of a grave at it. According to this example, the following effects are done so.

(1) Even if it is the case where visual display objects, such as a photograph, pictures, and a character, are prepared in a monument, with a base, it can guarantee semipermanently, without discoloring, and it can save semipermanently, without disappearing a face, a history, etc. concerning the deceased etc. conjointly in the image data with the property (monument) of tenebrescence, the gravestone of being especially protected over each generation of a stirps, etc. Therefore, it weathers, unless years of preservation is special, and even if it is data about the individual photograph and individual history which are easy to be made neglectful with the progress at the time, it can save as semipermanent personal memory. And harmony nature can be taken very much with the stone which constitutes the main part of a monument also in quality of the material, and those who see cannot be made to be able to sense sense of incongruity, but texture, grace, and a visual fine sight can be satisfied.

(2) When picture baking \*\*\*\* and quartz glass are pasted up on a monument using silicone adhesives, the affinity of \*\*\*\*, quartz glass, and the main part of a monument (stone) is good, and moreover, plan an impact absorption, though a shock joins \*\*\*\* and quartz glass, since it is rich in elasticity, and heighten the shock-resistant effect. Moreover, a crack crack does not occur like the binder using cement (mortar material), but it is made to contribute for guaranteeing semipermanently the holding power of \*\*\*\* or a quartz-glass board, and realizing the effect of (1).

(3) The modernistic monument of the new feeling which is not until now was able to be made to realize by replacing a main display element required for monuments, such as an epitaph, with stone engraving, and imprinted and burning to \*\*\*\* or quartz glass with a minerals pigment about picture baking \*\*\*\* 3 about an epitaph. Moreover, it becomes possible to respond to broad needs in arbitrary combination, such as a character, a photograph, and pictures, in this case. Moreover, it becomes possible to build a quality monument with the newest computer image processing technique without using the technology of stone engraving.

(4) Since it has the property to be hard to give a blemish, without being damaged even if it is mischievous, and it is roasted over fire or forced and carries out tobacco fire, in order to give 800-1300-degree C baking, even if it applies image data to the

monument exposed to the outdoors, it is releasable also from such mischievous anxiety. Drawing 4 is other examples of this invention, and attaches picture baking \*\*\*\* 1 (or picture baking quartz glass) for the main display element formed in \*\*\*\* of the stone which constitutes a gravestone 6 instead of stone engraving in this example. The picture printed on \*\*\*\* 1 is good in any one sort or such arbitrary combination of pictures, a photograph, and a character. The modernistic monument which has harmony with a stone and dignity instead of stone engraving of the new feeling which is not until now which moreover requires craftsman technology can be made to realize also in this example. Moreover, it becomes possible to respond to broad needs in arbitrary combination, such as a character, a photograph, and pictures. Drawing 5 attaches the quartz glass 11 which printed the minerals pigment concerning [ for example, ] image data on the gravestone 6 (or other various monuments) through adhesives 7 about other examples of this invention, and the breakthrough 12 for skylights which takes in light from the background of the quartz-glass board 11 is formed in the stone (monument) 6. From the convenience which forms a breakthrough 12, the insertion hole 8 of quartz glass 11 is formed in the opening periphery of a breakthrough 12. According to this example, a new viewing-angle-effect can be given to a monument by giving the watermark effect of light to the picture given to quartz glass. Drawing 6 is drawing of longitudinal section showing other examples of picture baking quartz glass 11. what (a) of drawing 6 imprinted the image data about the pictures described above on the whole surface (side front) of quartz glass 11, a photograph, a character, etc. by minerals pigment 5a, and was burned -- it is -- on the other hand (background) -- \*\*\*\* -- plain minerals pigment 5b is imprinted and burned Plain minerals pigment 5b has the desirable color which cannot absorb light easily like white. The field of the side front of quartz glass 11 is made into a transparent field, and imprints and burns image data by minerals pigment 5a as the 1st layer (inner layer) to the field of a background, and (b) of drawing 6 carries out imprint baking of solid color, for example, the white minerals pigment 5b, as the 2nd layer (outer layer). Contrary to (b) of drawing 6, (c) of drawing 6 imprints and burns image data by minerals pigment 5a as the 1st layer (inner layer) to the field of a side front, and carries out imprint baking of solid color, for example, the white minerals pigment 5b, as the 2nd layer (outer layer). According to these examples, it becomes the ground and lining cloth with which minerals pigment 5b prevents the light transmission of quartz glass 11. giving the viewing-angle effect equivalent to what lost watermark dotage, and imprinted and burned image data to \*\*\*\* -- possible -- becoming -- moreover -- (a) of drawing 6, (b), and (c) -- if -- The former can print in the state of a base, a picture can be seen, the latter will print over glass, a picture will be seen, by adopting one of things, the impression of a viewing-angle-effect can be changed and the range of a need person's selection can be extended. Quartz glass is melting temperature's being high compared with usual glass, and having the thermophylic-proof, and elevated-temperature baking of about 840 degrees C also being attained even if it is the case where use a minerals pigment, and image data is imprinted and burned, and printing a minerals pigment, in order to fuse and make silica with high purity, and silica sand, and guarantees discoloration and tenebrescence semipermanently like baking of the pattern of a ceramic article, or color. In addition, the example of drawing 6 does so the clear effect which it is possible to use it for various ornament uses besides a monument, spaces especially with the feeling of the quality of the material of quartz glass, and does not have dotage and in which it prints and both of image data are satisfied. Moreover, although the thing which was given to quartz glass and which printed and burned the plain minerals pigment as a watermark dotage means of a picture was illustrated in the example of drawing 6 As it replaces with this minerals pigment 5b and is shown in 13 of a sign, it blooms cloudy and the whole surface (or both sides) of a quartz-glass board is made into a field, and even if it uses minerals pigment 5a and imprints and burns image data on the whole surface of quartz glass, the same effect as the example of drawing 6 can be done so. This cloudy field is leaving without removing the coat of the cloudiness produced on the front face at the time of baking of quartz glass, namely, is not carrying out polish finishing of the glass side, and is acquired as it is. [Effect of the Invention] As mentioned above, without according to the 1st invention, excelling in harmony nature with a stone and dropping the grace of a monument, even if it constitutes visual display objects, such as a photograph, pictures, and a character, from a main part of a monument (stone), and a dissimilar material, moreover, quality degradation prevention of tenebrescence etc. can be guaranteed semipermanently and the visual display effect can be heightened. Moreover, a picture image can also be operated as semipermanent personal memory through monuments, such as a gravestone. According to the 2nd invention, the quality quartz glass with a picture which has utility value as the display object, the various ornaments in addition to this, and souvenir of the above-mentioned monument can be offered.

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[Translation done.]

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] The perspective diagram showing the example of the grave which applied this invention.

[Drawing 2] For (a), the perspective diagram showing the state in front of attachment of \*\*\*\* 1 of drawing 1 and (b) are a cross section after the attachment.

[Drawing 3] For (a), the perspective diagram showing the state in front of attachment of \*\*\*\* 2 of drawing 1 and (b) are a cross section after the attachment.

[Drawing 4] The perspective diagram showing other examples of this invention.

[Drawing 5] The fragmentary sectional view showing other examples of this invention.

[Drawing 6] The fragmentary sectional view showing the example other than this invention.

[Description of Notations]

1, 2, 3, 4 [ -- A plain minerals pigment, 6 / -- A gravestone, 7 / -- Adhesives 9 / -- An epitaph stone 11 / -- Quartz glass 12 / -- The breakthrough for skylights, 13 / -- Cloudy side. ] -- \*\*\*\* with a baking picture (or quartz glass), 5 -- The baking object (baking picture) of a minerals pigment, 5a

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[Translation done.]